

Dipkumar Patel

Stream: Information & Communication Technology

Date of Birth: 18th June, 1998

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ACADEMIC DETAILS

Degree	Institute / School	Board/University	Year	Results
B. Tech (ICT)	School of Engineering & Applied Science, Ahmedabad	Ahmedabad University	2015-19	3.63/4.33* (up to 7 th SEM)
HSC	M.B.Patel Gyanjyot, Ahmedabad	GSHSEB, Gandhinagar	2015	82.61%
SSC	M.B.Patel Gyanjyot, Ahmedabad	GSEB, Gandhinagar	2013	88.5%

SUMMER INTERNSHIP

- **Fusion Informatics**, Computer Vision, Gujarat, India (May 2018-June 2018)
Created Artificial Intelligence driven CCTV surveillance software for classification and localization of weapon (knife and pistol) with human, fire and smoke.
Implementation was done using Python, Tensorflow and OpenCV.

ACCEPTED PAPER

- Dhamsaniya, **Dipkumar Patel** and Harshkumar Patel
MMPL (Medicine Multi-Participant Ledger): A blockchain based solution to tackle the problem of illegal use and manufacturing of medicine, at International Workshop on Blockchain Technologies (IWBT 2018), NIT Warangal

PROJECTS

Project Portfolio: <https://immortal3.github.io/projects/>

- **Image Saliency Detection :**
As Human, We only focus on certain part of Image which is called salient region. This Project predict Saliency map of given Image which is useful in many areas like Robotics, Image-aware editing, caption generation, fast-response systems.
- **Autoencoder Based Communication System:**
Implementation of Deep Learning based End-to-End communication System which can outperform state-of-the-art modulation Schemes. Autoencoder is used to tackle noise of channel in communication through end-to-end learning. Learned Encoder and decoder can be used as transmitter and receiver.
- **Binary Gender Classification from Face Image using Machine learning and Deep Learning:**
A project on determining the gender of a person from live surveillance feed as well as images. We tried different approaches including Machine learning and deep learning. Finally, we implemented Compact CNN (Convolutional Neural Network) which has only 3 convolution layer and gained F1-score of 0.94 with real-time performance.
- **File System (EbFs):**
Created Portable and secured hierarchical File System from scratch in C. EbFs is inspired from ext2fs (Linux file system) which used inode data structures for storing meta-data. Implemented basic functionality like creation, deletion and view of file/directory. Added security features like Symmetric Encryption (AES) for file and randomized allocation of the block for a file which can protect from low-level attacks.
- **Hidden-Eye (Steganography and Steganalysis):**
LSB Steganography algorithm is implemented and enhanced for image/images in PNG format. Algorithm is able to hide data using password into image/multiple images. Tried Steganalysis on famous tool "steghide".

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TECHNICAL ELECTIVE COURSES

- **Machine Learning, Computer Vision**
- **Introduction to Blockchain, Cloud Computing**
- **Information System Security**

TECHNICAL SKILLS

Programming Languages: C, Python, Java, C++, MySQL, JavaScript (beginner)

Libraries: Tensorflow, PyTorch, OpenCV, Keras, Numpy

Software: git, MATLAB, Octave, Xilinx ISE

Platforms: Linux, Windows

ACTIVITIES & HONOURS

Co-Curricular Activities

- Completed [Deep learning Specialization](#) (all 5 courses) by Andrew Ng from **coursera.org**
- **Winner of Ingenious Hackathon, 2017**
- Completed **Applied CS with Android** workshop at SEAS, AU
- Attended Summer school 2017 on “**Learning in Data Science: Model, Algorithms and Tools**” Organized by AU

Extra-Curricular Activities

- Participated in Counter-Strike Global Offensive LAN gaming tournaments, hosted at SEAS in Ingenium 2017